TIMBER SALE REPORT AND APPRAISAL
SPRING CREEK INTEGRATED RESOURCE TIMBER CONTRACT
Sale Number - 10502

REGION TWO
SAN JUAN NATIONAL FOREST (13)
MANCOS-DOLORES RANGER DISTRICT (05)

Prepared by:_____ Date:_____
Matt Rathbone – Forester

Recommended by:_____ Date:_____
Mark Krabath - Supervisory Forester

This sale complies with section 6 (g) (3) (E)-(F) of the National Forest Management Act of 1976, Public Law 108-7, 36 CFR 223.1, the San Juan National Forest Land and Resource Management Plan approved 09/29/83, amended 05/12/92, and the Decision Notice and Finding of No Significant Impact for the Aspen Forest Health and Restoration Project dated 07/02/2009.

Approved by:_____ Date:_____
Derek Padilla - District Ranger

SUMMARY OF RECOMMENDATIONS

Contract Type: 2400-13 (IRTC)

Specified Road Cost: n/a

Sale Volume: 8,865 CCF

Road Completion Date: n/a

Method Of Sale: Sealed Bid, 30-day ad, Best Value

Sale Termination Date: March 31, 2018

Normal Operating Season: June 10 to Nov. 15

Method of Measurement: AS - weight scale

Deficit Sale: NO

Bid Guarantee: n/a

Minimum Performance Bond: $ 7,000

Operations Fire Liability: $2,600

Rate Adjustment: No

Advertised Minimum Bid Rates:

SPECIES – PRODUCT	ADVERTISED RATE
Live & Dead Aspen Misc. Conv.	$ 4.37
Total Appraised Advertised Sale Value	**$ 38,740.05**

Contract Summary and Location

This Spring Creek Stewardship Integrated Resource Timber Contract (IRTC) is part of the larger Aspen Forest Health and Restoration Project area. This project was developed under the Healthy Forest Restoration Act of 2003 to restore and regenerate over 3000 acres of aspen forest that is currently experiencing various degrees of decline. Treatments were planned to include a combination of commercial coppice clearcut harvesting, prescribed broadcast burning and/or mastication. The project was originally conceived to consist of five separate timber sale or contract offerings. The Spring Creek Contract is designed to harvest and regenerate thirteen units. totaling 344 +/- acres. All of the cutting units will treat aspen stands using a combination of conventional ground-based mechanized logging and coppice clearcut harvest methods.

In addition to the traditional timber harvest and related activities, the stewardship contract would use additional service work items to:

- contribute to the maintenance of watershed health by furnishing and installing two corrugated metal culvert pipes at intermittent stream crossings of Forest system roads located within the project area.

The goods involved in this contract would be the merchantable (6.0"+ dbh) live and dead aspen products. Aspen markets in the San Juan area have remained stable in recent years and it is anticipated that the value of these goods will more than offset the cost of the service work items. It is

our intent to retain any residual receipts generated by this contract and apply those funds to future stewardship contracting projects on the Mancos-Dolores Ranger District of the San Juan National Forest.

The combination of aspen restoration harvest treatments and associated service projects proposed in this contract would contribute toward three of the seven land management goals identified in Section 323 of Public Law 108-7.

1. Road and trail maintenance or obliteration to restore or maintain water quality;
2. Removing vegetation or other activities to promote healthy forest stands, reduce fire hazards, or achieve other land management objectives;
3. Watershed restoration and maintenance;

The use of Stewardship authority as authorized by this law would allow us to support these needed restoration goals in the most financially efficient manner possible. The cost of the service items would be offset by the value of the timber products and the need for supplemental appropriated funds is not anticipated.

The Spring Creek IRTC is located on the Mancos-Dolores Ranger District, San Juan National Forest. The sale is approximately 11 miles north of Mancos, CO in Montezuma County. The primary access route to the Sale is north out of Mancos on County Road 42 (West Mancos Road) to Forest Service Roads 561 and 562.

Legal Description: Portions of Sections 25, 26, 35 & 36, Township 38 North, Range 13 West; Portions of Sections 30, 31 & 32, Township 38 North, Range 12 West; Portions of Sections 6 & 7, Township 37 North, Range 12 West, New Mexico Principal Meridian, Montezuma County, CO.

Decision Notice Summary

The District Ranger approved the Decision Notice and Finding of No Significant Impact for the Aspen Forest Health and Restoration Project Environmental Assessment on July 2nd 2009.

The decision as stated in the Decision Notice is:

> … to implement Alternative B (Proposed Action) in its entirety as described in Chapter 2 of the EA and including Design Features (Attached) and the Monitoring Plan (Appendix C of EA). In addition, the following design criteria is added;

When evaluating conditions and creating burn plan for the landscape burns, consider the timing of hunting season. Notify the outfitter guide that is permitted to take hunters on the Dolores District prior to initiating the burn.

This Decision includes the following actions. Maps are located in Appendix A of the EA.

> Coppice Clearcut Regeneration Treatment with reserves (~1,550 acres) – See Maps in Appendix A of EA. Harvest includes the following:

- All merchantable trees removed, and unmerchantable trees cut and left on site, except patches of aspen or conifer trees retained as reserve clumps on 10-15% of each unit. Patches of existing healthy regeneration will be retained where feasible.
- Objective is a new young stand of aspen, with scattered clumps of snags, conifer, or older trees.
- Unit openings range in size from 9 acres to 109 acres. Some proposed units share a partial boundary with units in the ongoing Turkey Knolls timber sale, and larger temporary openings may be created depending on the year harvested.
- Regeneration harvests would be accomplished with commercial timber sales administered by the Forest Service.
- Areas would be cut at different times over a 3-7 year period with the first timber sale offered in 2010.
- Follow-up prescribed burning may occur on any unit, however it is likely only a few units may be selected based on timing of harvest and burning conditions.

Required Mitigation Measures & Design Criteria for Spring Creek Timber Sale

The following conditions will be included in the Timber Sale Contract in order to implement the design criteria detailed in the Aspen Forest Health and Restoration Project Environmental Assessment as well as Forest Plan Standards and Forest Service Timber Sale policy.

Vegetation - Prescriptions

Wildlife/Visual or Sapling size clumps will be left in or adjacent to the clear-cut harvest units and comprise 10-15% of the unit acres. These reserve clumps will function as snag and wildlife habitat, contain conifer that is undesirable to aspen harvest or serve as a visual screen to breakup clear-cut appearance near well traveled forest roads.

a. Wildlife reserve clumps should be a group of live and/or dead trees, aspen or conifer, a minimum ½ acre is size but larger groups of 2-5 acres are recommended. Favor i) live and/or dead large diameter (>15") aspen or conifer with evidence of cavities, rot, broken tops, dead tops or lightning strikes, and ii) a basal area of 100 or greater. Locate clumps strategically to take advantage of existing conifer pockets, or pockets of large aspen trees, small-scale boggy areas or rocky soil, otherwise distribute evenly.
b. Visual reserve clumps – see visual quality below.
c. Sapling clumps – see #1. above.
d. Clumps of trees at entrance of temporary roads from main roads (where they occur) to screen and prevent travel on the temporary road.

- *These standards for reserve clumps were incorporated into the unit layout primarily by working around appropriate areas adjacent to the cutting units. Areas of regeneration were also reserved within several cutting units.*

Douglas Fir and Ponderosa pine will be retained for residual stocking in aspen clear-cut units as regeneration is more questionable in lower elevation SAD stands. Conifer at higher elevations (Engelmann Spruce, Blue Spruce and Subalpine fir) may be harvested on an individual unit basis if regeneration looks promising and conifer volume is adequate.

- *The included timber for this sale will be Aspen only. (reference A2 – Volume Estimate & Utilization Standards; 2.3521# - Designation By Species And Diameter)*

Viable small-diameter sapling and pole size aspen (<5" DBH) found in clumps will be protected and left on site where feasible. These clumps should be retained to provide size class diversity and residual stocking across an otherwise clearcut area. Damaged small diameter conifer and aspen(<5"->2" Dbh) will be slashed by the purchaser. Slash from the tops of the trees and rotten log segments may be left in the harvest units in a random fashion, and lopped to within 2 feet of the ground. The objective is to leave 15-20 tons per acre of slash in order to provide nutrient cycling, habitat for wildlife, and soil protection. Whole tree skidding will be allowed if the slash objective can be met.

- *These standards for slash treatment are incorporated into the purchaser's slash responsibility via the contract special provisions. (reference C6.7# - Slash Treatment)*

Vegetation – Timing of Harvest

Normal Operating season for these SAD aspen sales will be June 10 thru Nov 15th. On units with a majority of dead, units may be required to be logged during a fall season (leaf off) of 9/15 thru 11/15 to promote aspen suckering during a leaf off time period. These units will not be more than 25% of the sale acres.

- *The Normal Operating Season for this sale is set at June 10th thru November 15th annually. Fall season logging will not be required for any units in this sale. (reference A16 – Normal Operating Season)*

On harvest units accessed by the West Mancos Rd (FSR 561) and the Echo Basin Rd (FSR 566) , to prevent conflicts with winter recreation on groomed snow trails there will be no logging operations permitted from December 15th to April 15th.Winter snow plowing to facilitate logging operations would conflict with these uses. In other areas that do not have high winter recreation usage, winter logging should be an option, as sprouting following winter harvest may be more successful.

- *All of the units in this sale will be accessed by and hauled out on FSR 561. No harvesting operations or hauling will be permitted from December 15th to April 15th to avoid conflicts with snowmobile users. (reference C5.12# - Use of Roads by Purchaser; C6.312# - Sale Operations Restrictions)*

A few timber-sale units border or surround the Morrison trail, a popular ATV route in the Spring Creek area. During logging operations on these units, the trail will be posted closed for public safety reasons, and a re-route sign to divert traffic along roads will be posted by the Forest Service. The Timber Sale Administrator will inform the District recreation staff on purchasers operating plan and timing for those units affected. Portions of the Morrison trail that lie in the harvest unit will not be used as skid trails (protected improvement) and skid trails across this trail will be limited and approved by the TSA. Slash located on the Morrison trail will be removed and trail will be left as it was found by the purchaser. Trail will be re-opened upon completion of logging operations.

- *Special felling and skidding objectives will be used to protect the Morrison ATV trail from damage.. (reference C6.411# - Felling and Bucking (special objectives); C6.42# - Skidding and Yarding (special objectives))*

Vegetation – Landings, Skid Trails, Temporary Roads and Forest Roads

Minimize the size of landings because they tend not to readily regenerate by sprouting. Rip landings to a depth of 6-8 inches, following use to encourage coppice regeneration and reduce compaction. Slash on landings is to be lopped and scattered to within 2 feet of the ground, and residual debris volume should range from 15 to 20 tons per acre. The overall objective will be that 40-50% of the landing area has exposed mineral soil, or that on 40-50% of the landing, slash does not block sunlight from reaching the ground surface. Pile landing slash or redistribute back into the harvest unit if necessary to meet this objective.

Location of skid trails shall be agreed upon by the Forest Service prior to their use.

- *Landing and skid trail locations will be approved in advance by the Forest Service and size will not exceed that needed for efficient operations. Landings will be obliterated following the completion of the purchaser's activities. These standards for slash treatment are incorporated into the purchaser's slash responsibility provisions. (reference C6.7# - Slash Treatment; B6.422 - Landings & Skid Trails; C5.34# - Obliteration of Temporary Roads, Skid Trails and Landings)*

All temporary roads used by the contractor would be decommissioned following harvest. Decommissioning would include outsloping (if possible), constructing non-drivable waterbars, scarification of the road surface to a depth of approximately one foot, seeding of the roadbed for the entire length and width with the seed mix listed below, and removal of all culverts to restore the stream channel to approximately its original plan and profile. The non-drivable waterbars shall be located according to the spacing chart in the transportation plan. None of these temporary roads will be added to the Forest Service road system. Final determination of need, location and length of temporary roads is requested by the timber-sale contractor, and approved by the Forest Service Timber Sale Administrator.

- *Temporary road locations will be approved in advance by the Forest Service and size will not exceed that needed for efficient operations. All temporary roads will be obliterated and seeded to Forest Service specifications following the completion of purchaser's activities. These standards for slash treatment are incorporated into the purchaser's slash responsibility provisions. (reference B5.1 – Authorization; C5.34# - Obliteration of Temporary Roads, Skid Trails and Landings; C6.601# – Erosion Control Seeding)*

Wildlife

Personnel involved in timber marking and burning should be trained in raptor nest identification. This will allow project personnel to become familiar with raptors and to conduct nest searches during burn project layout activities.

If an active goshawk nest is found during layout, a ¼ mile no-activity (mechanical treatment) buffer will be placed around the nest site from March 1 – August 15, and a 30 acre no-cut buffer will be also placed around the nest. If active nest is found post sale award, wildlife biologist will be notified, nest will be surveyed and proper mitigation will be determined.

- *Pre-sale personnel are trained in Goshawk ID. No goshawks or nests were discovered in pre-sale activities. In the event that sites are discovered after sale award, the Contracting Officer may interrupt the Purchaser's operations. (reference B6.24 - Protection Measures Needed for Plants,*

Animals, Cultural Resources, and Cave Resources)

Surveys for purple martins will be conducted in analysis area prior to any treatment of units that border meadows and ponds. If nests are found outside of the 50 m buffered area, the buffered area will need to be extended to include the nest trees. Leave a 150 foot mature aspen buffer between cutting unit, and meadows that contain purple martin nesting colonies

- *No purple martin nesting sites were discovered during layout or pretreatment surveys.*

To retain potential habitat for the Northern Leopard Frog, buffer wetlands a distance equal to 2 times the maximum diameter of the wetland up to 150 feet.

- *Ponds adjacent to cutting units 3, 5, 6 and 13 were avoided during unit layout.*

Cultural Resources

Any 'Eligible' or 'Need Data' sites within the project area would be avoided by project activities. During Marking and Cruising of the clearcut harvest units, layout of the mastication unit or pre-monitoring of the landscape burn areas, notify the District archaeologist if any historical (50+ year old) arborglyphs are found. The District archaeologist will determine if the glyph is of historical interest and if so record the site and the trees will be protected from harvest activities. If any additional cultural resources are discovered during project activities, activity at that location would cease and the District Archaeologist would be notified. The discovery would then be recorded and assessed, and the appropriate mitigations and consultations would be completed. The decision on whether to continue implementation at that location would be based on this assessment and consultation.

- *Sites requiring protection were avoided during unit layout. No additional sites or historic arborglyphs were discovered. In the event that sites are discovered after sale award, the Contracting Officer may interrupt the Purchaser's operations. (reference BT6.24 - Protection Measures Needed for Plants, Animals, Cultural Resources, and Cave Resources)*

Public Health/Safety

Safety signing and other warning measures will be required during logging operations to protect the public and administrative personnel and to prevent accidents. Purchasers are required to follow all traffic laws and can be issued citations if they do not.

- *Purchaser will be required to furnish and maintain temporary traffic controls sufficient to warn of potentially hazardous conditions at key locations. (reference B6.33 - Safety)*

Rangeland Resources

Loggers will be required to keep fences in good repair during operations. Wherever possible, the purchaser should use existing gates for access to cutting areas. No fences are to be cut unless absolutely necessary and agreed to in writing by the timber sale administrator. In most cases where fences lie within cutting units, design skidding patterns to be parallel to fence lines, to pull timber away from fences, or to go through existing gates. In the event temporary roads and skid trails are

needed to cross fences at other than existing gate locations, these breach points must be double H-braced on each side of the cut and closed with wire or a metal gate. Any fences damaged by loggers will be the responsibility of the timber purchaser to repair immediately.

- *Purchaser is required to protect and/or repair all improvements. Fences shall not be cut unless the fence has been properly braced to prevent loss of tension. (reference B6.22 - Protection of Improvements; C6.223 - Protection of Fences)*

Noxious Weeds

Hydro-axes or mastication equipment will be cleaned at an offsite location prior to entering the project area. Logging equipment will be subject to contract clauses for equipment cleaning. Pickup trucks and passenger vehicles are not subject to this requirement. If mastication equipment is removed from the project area, it will again be cleaned at an offsite location prior to re-entering the project area.

- *All off-road equipment will be required to be cleaned prior to moving onto the sale area. (reference BT6.35 Equipment Cleaning)*

Soil and Water

Buffer perennial streams and wetlands by 100ft or by the mean height of mature dominant late-seral vegetation, whichever is greater (see also Leopard Frog criteria). Do not drive machinery in riparian areas. Do not reduce/mechanically treat riparian-wetland vegetation.

- *All perennial streams were avoided during layout. Ponds adjacent to cutting units 3, 5, 6 and 13 were avoided during unit layout. The perennial stream near unit 11 was avoided.*

Restrict hydro-mowing and timber harvest activities during periods of spring snowmelt and periods of heavy rain when soils are too wet. Soils are too wet when the moisture content exceeds the plastic limit. If soils within 6 inches of the surface can be rolled into threads 3 millimeters in diameter without breaking or crumbling, they are too wet.

- *Equipment shall not be operated when ground conditions are such that excessive damage will result. All temporary road work and all mechanized felling, processing and/or skidding will be restricted annually from February 15th to May 31st. (reference B6.6 - Erosion Prevention & Contol; C6.312# - Sale Operation Restrictions)*

CONDITIONS OF SALE

Silvicultural Prescriptions:

Silvicultural prescriptions and marking guides were prepared by Matt Rathbone and Mark Krabath, a certified R2 silviculturist, approved the detailed stand prescription and marking guides for the harvest units. The selected harvest method for these aspen stands is an even-age harvest method using a clearcut-coppice system. The prescription was developed to meet the objectives of the selected alternative.

Marking and Volume Determination Summary:

This sale implements one of five planned timber sales under the Aspen Forest Health and Restoration Project. Thirteen cutting units (+/- 344 acres) located within upper Spring Creek area have been established during the layout of this sale. All of the cutting units will treat Aspen stands using a combination of conventional ground-based mechanized logging and coppice clearcut harvest methods. Each cutting unit was flagged with orange flagging, marked in Orange tracer paint, and GPS'd to determine the area. A detailed GPS acreage determination report is included in the presale folder and includes the specifications that were used to ensure the accuracy of the GPS data since this is used to determine the final sale volume.

The unit boundaries were marked with Orange tracer paint using procedures specified in the marking guide and R2 Timber Cruising Handbook. Paint used for this marking was **Orange Rain Resistant Lot #R0475** and **Orange Aerosol Lot #W0277**.

The Spring Creek Timber Sale Cruise Plan contains detailed information about the cruise design and implementation. Matt Rathbone, a R2 certified cruise designer, prepared the plan. The cruise net cubic volume sale-as-a-whole sampling error of 22.10% and individual strata errors of 37.69% and 27.06% respectively is within the error standards for a scaled sale with an estimated value between $55,000 and $75,000. The cruise plan and cruise report are located in the presale folder.

Method of Measurement:

The Aspen – POL volume will be measured using a total weight scale system. An adjusted weight factor for live and dead aspen, based on the cruise percentage of live and dead and an estimate of how much "fading" live aspen will likely be dead at the midpoint of the sale will be used to weight scale the sale volume. The cruise indicated 6995 CCF of live Aspen, 786 CCF of fading live Aspen and 1084 CCF of dead Aspen. Additionally, it is estimated that 67% of the fading live Aspen that was cruised will be dead at the time of scaling. Therefore, the combined weight factor for this sale will be based on 7254 CCF (81.8%) live aspen and 1611 CCF (18.2%) dead aspen. This calculation was performed using a spreadsheet developed by Gerry Ryszka, Regional Measurements Specialist, and came to **54.24 LBS** per cubic foot.

Harvest Operations:

All the sale units can be harvested with ground based skidding equipment. The area is well roaded so no new classified roads will be built as part of the sale. The volume can be efficiently removed by using FSR 561, FSR 560, FSR 559, FSR 327, FSR 382, existing non-system roadbeds that traverse the area and approximately 1.9 miles of new temp roads and spurs. The existing closed roadbeds and any new short spurs or temporary roads that are constructed will be treated as temporary roads in the contract and obliterated by the purchaser after use. A detailed logging plan and map as well as a road maintenance plan are included in the presale folder.

Regeneration:

The aspen clearcut units will typically vegetatively regenerate after cutting. Aspen throughout the San Juan NF has a history of successful coppice regeneration after clear cutting. The National Forest Management Act (NFMA) of 1976 requires monitoring of the natural regeneration to ensure that the stands are adequately stocked within 5 years of harvest. This cost will be made an essential project within the KV plan.

Associated Plans:

Brush Disposal Treatment Plan (FS-2400-62) - This BD plan describes slash treatment obligations and costs incurred by the Forest Service. Deposits will be collected from the Purchaser to cover the Forest Service cost of burning the resulting slash piles.

Sale Area Improvement (K-V Collection) Plan (FS-2400-50) – The sale area improvement plan describes improvement projects within the Sale Area that may be funded through timber sale receipts. In this sale, the projects to be completed with K-V funds are described in the Sale Area Improvement Plan Narrative Statement. Adequate K-V funding for all non-essential K-V work may be supplemented with other funding if available.

Total Planned K-V Collection: $ 8,756
Total Required Reforestation: $ 3,968 ($0.45/CCF)

Salvage Sale Fund Plan (FS-2400-51) – Although this sale contains a salvage component, no SSF funds were used to prepare the sale and no stumpage receipts will be collected into the Forest Salvage Fund. Excess stumpage receipts will be held in the Forest level Retained Receipts account for use on future stewardship contracts.

TIMBER APPRAISAL PREMISES

Current Appraisal Base Data

BULLETIN NO. BU230214 – (effective February 07, 2013)			
BASE DATA PERIOD: 4th Qtr CY12 thru 3rd Qtr CY13			
APPRAISAL BASE PERIOD: 6-13			
BASE INDEX (per MBF) N/A			
BASE INDEX Adjusted to CCF: N/A			
INDEX OPERATIONS – ASPEN P.O.L			
SPECIES:	AS		
Adjusted Base Period Price:	**2.82**		
Base Skid-Yard Cost	n/a		
Base Haul	0.00		
Base Road Maintenance	4.89		
Base Slash	0.00		
Base Temp Roads	2.20		

Sale Statistics

	Units	**Sale Total or Avg.**	ASL (Live)	ASF (Fading)	ASD (Dead)
Gross Volume	CCF	**10816**	8321	939	1556
Average Total Defect/Breakage	%	**18%**	16%	16%	30%
Contract Volume(Net)	CCF	**8865**	6995	786	1084
% Net Volume By Species/Group	%	**100%**	79%	9%	12%
Ave. Net Volume/Tree	CF	**11.4**	13.8	11.3	5.4
Ave. Net Volume/Acre	CCF	**25.8**	20.3	2.3	3.2
Net BF/CF Ratio	n/a	**4.997**	4.966	5.127	5.097
Quad Mean DBH/Species	Inch	**10.5**	11.1	10.6	8.7
Total Number of Trees	Trees	**77,687**	50,638	6,980	20,069

Cruised Timber Volume By Cutting Unit (CCF)

Cutting Unit	Payment Unit	Acres	ASL (Aspen-Live)	ASF (Aspen-Fading)	ASD (Aspen-Dead)	Cutting Unit Volume
1	1	31	537	43	96	676
2	2	9	156	12	28	196
3	3	27	619	83	86	788
4	4	45	780	62	139	981
5	5	34	589	47	105	741
6	6	47	1077	144	151	1372
7	7	33	756	101	106	963
8	8	21	481	65	67	613
9	9	17	390	52	54	496
10	10	23	527	70	74	671
11	11	31	537	43	96	676
12	12	17	390	52	54	496
13	13	9	156	12	28	196
TOTAL		**344**	**6995**	**786**	**1084**	**8865**

Road Maintenance

The basic unit cost rates used to calculate road maintenance are from the San Juan National Forest Road Maintenance and Temporary Road Cost Guide prepared by the forest engineering staff. These rates include applicable contractor overhead on both labor and equipment.

Pre-Haul Maintenance will be performed by the contractor on the following roads per contract provision K-F.3.1# specifications. It is assumed these maintenance items will be performed once, before hauling is begun.

Level I Roads:				
NFSR 093 (Big Block Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), Roadway Vegetation(T807) & Misc. Structures (T808)	$ 635/mile	0.7 miles	$ 445
Level II Roads:				
NFSR 382 (Spring Creek Pt. Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), Roadway Vegetation(T807) & Misc. Structures (T808)	$ 635/mile	1.9 miles	$ 1,207
		Total Pre-Haul Maintenance:	2.6 miles	$ 1,652

During Haul Maintenance will be performed by the contractor as needed on the following roads per contract provision K-F.3.1# specifications.

Level I Roads:				
NFSR 093 (Big Block Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805) & Misc. Structures (T808)	$ 390/mile	0.7 miles	$ 273
Level II Roads:				
NFSR 382 (Spring Creek Pt. Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805) & Misc. Structures (T808)	$ 490/mile	1.9 miles	$ 931
Level III Roads:				
NFSR 327 (Spring Creek Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	$ 490/mile	1.8 miles	$ 882
NFSR 560 (Lost Canyon Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	$ 490/mile	3.9 miles	$ 1,911
NFSR 561 (West Mancos Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	$ 490/mile	5.3 miles	$ 2,597
		Total During-Haul Maintenance:	13.6 miles	$ 6,594

Post Haul Maintenance will be performed by the contractor as needed on the following roads per contract provision K-F.3.1# specifications. It is assumed these maintenance items will be performed once, after hauling is completed.

Level I Roads:				
NFSR 093 (Big Block Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805) & Misc. Structures (T808)	$ 390/mile	0.7 miles	$ 273
Level II Roads:				
NFSR 382 (Spring Creek Pt. Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805) & Misc. Structures (T808)	$ 490/mile	1.9 miles	$ 931
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NFSR 560 (Lost Canyon Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	$ 490/mile	3.9 miles	$ 1,911
NFSR 561 (West Mancos Road)	Ditch Cleaning(T802), Surface Blading(T803), Drainage Structures(T805), & Misc. Structures (T808)	$ 490/mile	5.3 miles	$ 2,597
		Total Post-Haul Maintenance:	13.6 miles	$ 6,594

Total Purchaser Maintenance Cost: $1,652 + $6,594 + $6,594 = $14,840
The Cost Guide was last updated in 2008, so all costs will be adjusted with an inflation factor of 2% per year for six years (1.104)

$14,840 x 1.126 ≈ $16,710 **or $1.88/CCF**

Surface Rock Replacement Deposits

FOREST PRIMARY TIMBER SALE HAUL ROADS WITH AGGREGATE SURFACE

FSR 327 seg. 2 (mp 1.2 - 1.8)	0.6	0.3	0.378	0.227	5,960	$1,351.73
FSR 327 seg. 1 (mp 0.0 - 1.2)	1.2	0.3	0.378	0.454	7,442	$3,375.69
FSR 560 seg. 1 (mp 0.0 - 2.3)	1.6	0.3	0.378	0.605	663	$400.98
FSR 560 seg. 2 (mp 2.3 - 3.9)	2.3	0.3	0.378	0.869	8,865	$7,707.23
FSR 561 (mp 0.0 - 5.3)	5.3	0.3	0.378	2.003	8,865	$17,760.14
			0.000	0.000		$0.00
			0.000	0.000		$0.00
			0.000	0.000		$0.00
						$0.00
					TOTAL SPRING CREEK IRTC	$30,595.77
					COST PER CCF (8865 CCF)	$3.45

Maintenance Summary:

	Total Cost	Volume	$/CCF
Contractor Required Performance	$ 16,710.00	8,865 ccf	$ 1.88
Surface Rock Replacement Deposits	$ 30,595.77	8,865 ccf	$ 3.45
TOTAL ROAD MAINTENANCE COST	$ 46,980.77	8,865 ccf	**$ 5.33**

Temporary Roads Construction & Decommissioning

Temporary road costs include clearing & grubbing if applicable, excavation, obliteration, seeding and mobilization costs. The basic unit cost rates used to calculate road maintenance are from the San Juan National Forest Road Maintenance and Temporary Road Cost Guide prepared by Gary Ferdinando. These rates include applicable contractor overhead on both labor and equipment. See the Temporary Road Cost Estimate spreadsheet for additional details.

Temporary Road	Miles	Access Unit	Cost per Per Mile	Cost per Per Road
New Construction Temp Roads	1.7	All	$8,409	$14,295
Existing Non-system Roads	4.0	All	$4,405	$17,620
TOTAL MILES:	**5.7**			
	TOTAL TEMP ROADS:			$ 31,914
	PROJECT MOVE IN:			$ 932
	TOTAL TEMP ROAD COST:			$ 32,847
Inflated Cost @2% per year from 2008 to 2014:				$ 36,986
	TOTAL COST PER CCF (8865 ccf):			**$4.17/ccf**

Haul Costs

P.O.L. (Aspen) Haul Cost Adjustment to Mancos, CO

The nearest operating mill to this timber sale that is capable of processing this volume & type of aspen material is Western Excelsior located outside Mancos, CO. P.O.L. specific sale adjustment is calculated by subtracting the average haul mileage from the sale haul mileage and multiplying by the haul rate of $ 0.17/CCF/mile. The TEA database average haul distance for P.O.L. is a constant 52 miles. (FSH 2409.22, Chap. 71.71)

Haul mileage from the Spring Creek Contract Area to Mancos, CO is approximately 25 miles.
23mi. – 52mi. = -29mi. x $0.17/CCF/mile = **- $ 4.93/CCF**

Slash Disposal

According to the provision, K-G.7# - *Slash Treatment*, the Contractor will be required to pile all slash that is left at landings following whole-tree yarding. These piles will be burned by Forest Service force account crews when conditions allow. BD deposits will be charged to the contractor and collected to offset the cost of this burning operation. It is estimated that the burning can be accomplished in four days by a crew consisting of one GS-9 and two GS-7s. Daily rates are approximations from the WorkPlan system.

GS-9 * $260/day * 4 man-days = $1,040
GS-7 * $200/day * 8 man-days = $1,600
$2,640

Inflated to 2015 = $2,640 * 1.0404 = $2,746.66

National Collection Rate (Program Support) = $2,746.66 * 1.413 = $3,881.03
or, ≈ **$0.44/CCF**

Unusual Adjustments

Unusual adjustments are sale adjustments made necessary for cost or value items that are not reflected in the appraisal database. (FSH 2409.22, 51.6)

A. Adjustment for Dead Aspen:

Per Region 2 Letter *"Direction for Selling Dead Timber" - August 11, 2004*, appraisal unusual adjustments (reductions) will be developed for the portion of the Aspen that was cruised as Dead volume and for an estimated amount of Fading Live Aspen that will likely be dead at the midpoint of the contract.

1)Cruised net volumes were:
ASL = 6995 CCF Aspen-Live
ASF = 786 CCF Aspen-Fading Live
ASD = 1084 CCF Aspen-Dead

It is estimated that an additional 67% of the "fading" live Aspen will be dead at the midpoint of the contract, so a total of 1611 CCF of Aspen will be appraised as Dead.

2)The Live adjusted base period price for Aspen is multiplied by 0.5 for the dead adjustment:
$2.82/CCF x 0.5 = $1.41/CCF

3)A weighted adjustment is developed to be applied to the combined live and dead Aspen & Other volume: 1611CCF/8865CCF = .18 x $1.41/CCF

= **$0.25/CCF** for all Live & Dead AS and Other volume

Contractor Liability Limit per Operations Fire (reference A.14 & H.4.1)

Firefighter Type 2 (crewmember)
AD-C Wage rate (FSH id5109.34-2013) = $17.40/hr.

Estimated number of persons needed to operate the sale = 4
$17.40/hr. x 12hr. day x 4 persons x 3 days = $ 2,505.60
Rounded up to **$2,600**

Stewardship Projects (reference A.4.3 & K-G.9#)

The Spring Creek Integrated Resource Timber Contract (IRTC) would use contract service work to furnish and install two corrugated metal culvert pipes at intermittent stream crossings of Forest system roads. The attachment to special provision K-G.9# - *Stewardship Projects* describes in detail the contract requirements and specifications for the Stewardship Projects listed in A.4.3

Performance Bond

The minimum Performance Bond for this sale shall be the greater of either the estimated performance bond amount based on the advertised value or the calculated cost of the mitigation work required from the Contractor after one operating season.

The estimated Performance Bond Amount Is:

Advertised Value = $38,740 x 0.1 = $ 3,874 (rounded up to $ 4,000.00)

The calculated Performance Bond Amount Is:

-Post Haul road maintenance on approx. 1/2 of system roads (from pg. 13) = $3,297

-Decommission approximately 1/2 of the estimated temp roads needed:
2.8 miles (from pg. 14) x $1,024/mile = $ 2,867

$3,297 + $2,867 + $1,845 = $6,164 (rounded up to $7,00.00)

The minimum Performance Bond amount for this sale will be **$ 7,000.00.**